



6SJ7, 6SJ7-GT

TRIPLE-GRID DETECTOR AMPLIFIER

6SJ7
6SJ7-GT

		Coated Unipotential Cathode			
Heater		Voltage		a-c or d-c volts	
Current		0.3		amp.	
Direct Inter. Cap. ^o		6SJ7	6SJ7-GT		
Pentode Conn.	Grid to Plate	0.005	0.005	max.	μpf
	Input	6.0	6.3		μpf
	Output	7.0	10		μpf
Triode Conn.†	Grid to Plate	2.8	2.0		μpf
	Grid to Cathode	3.4	3.2		μpf
	Plate to Cathode	11	11.0		μpf
Maximum Overall Length		2-5/8"	3-5/16"		
Maximum Seated Height		2-1/16"	2-3/8"		
Maximum Diameter		1-5/16"	1-5/16"		
Bulb		Metal Shell MT-8		T-9	
Base		Small Wafer Octal 8-Pin		8-Pin. Sleeve	
Basing Designation		6SJ7, Shell		GT-8H	
Pin 1 { 6SJ7, Base		Sleeve		Pin 4 - Grid	
Pin 2 - Heater				Pin 5 - Cathode	
Pin 3 - Suppressor				Pin 6 - Screen	
Mounting Position				Pin 7 - Heater	
				Pin 8 - Plate	

BOTTOM VIEW

Maximum And Minimum Ratings Are Design-Center Values

AMPLIFIER (Pentode Connection)

Plate Voltage	300 max.	volts
Screen Voltage	125 max.	volts
Screen Supply Voltage	300 max.	volts
Grid Voltage	0 min.	volts
Plate Dissipation	2.5 max.	watts
Screen Dissipation	0.3 max.	watt

Typical Operation and Characteristics—Class A₁ Amplifier:

Plate	100	250	volts
Screen	100	100	volts
Grid	-3	-3	volts
Suppressor	Connected to cathode at socket		
Plate Res.	0.7	#	megohm
Transcond.	1575	1650	μmhos
Grid Bias for plate current=10 μamp.	-8	-8	volts
Plate Cur.	2.9	3	ma.
Screen Cur.	0.9	0.8	ma.

AMPLIFIER (Triode Connection)†

Plate Voltage	250 max.	volts
Grid Voltage	0 min.	volts
Plate Dissipation	2.5 max.	watts

Typical Operation and Characteristics—Class A₁ Amplifier:

Plate	180	250	volts
Grid	-6	-8.5	volts
Amp. Fact.	19	19	
Plate Res.	8250	7600	ohms
Transcond.	2300	2500	μmhos
Plate Cur.	6	9.2	ma.

■ In circuits where the cathode is not directly connected to the heater, the potential difference between heater and cathode should be kept as low as possible.

o With shell or external shield connected to cathode.

Greater than 1.0 megohm.

† With screen and suppressor connected to plate.

- Indicates a change.

For additional data, refer to RESISTANCE-COUPLED AMPLIFIER CHART.

June 1, 1942

RCA RADOTRON DIVISION
RCA MANUFACTURING COMPANY INC

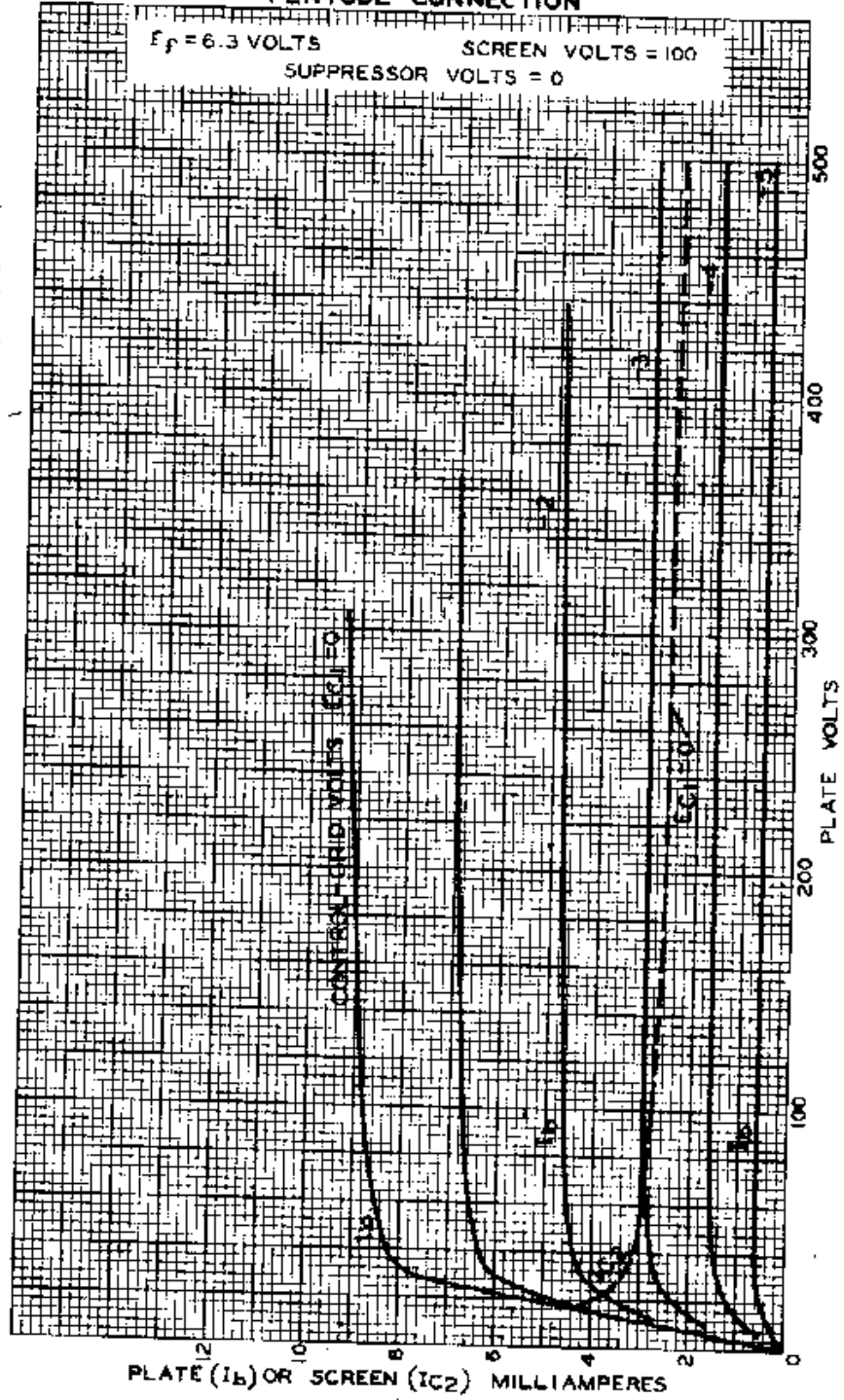
DATA

65J7



65J7

AVERAGE PLATE CHARACTERISTICS PENTODE CONNECTION



JUNE 23, 1938

RCA RADIODIODE DIVISION
RCA MANUFACTURING COMPANY, INC.

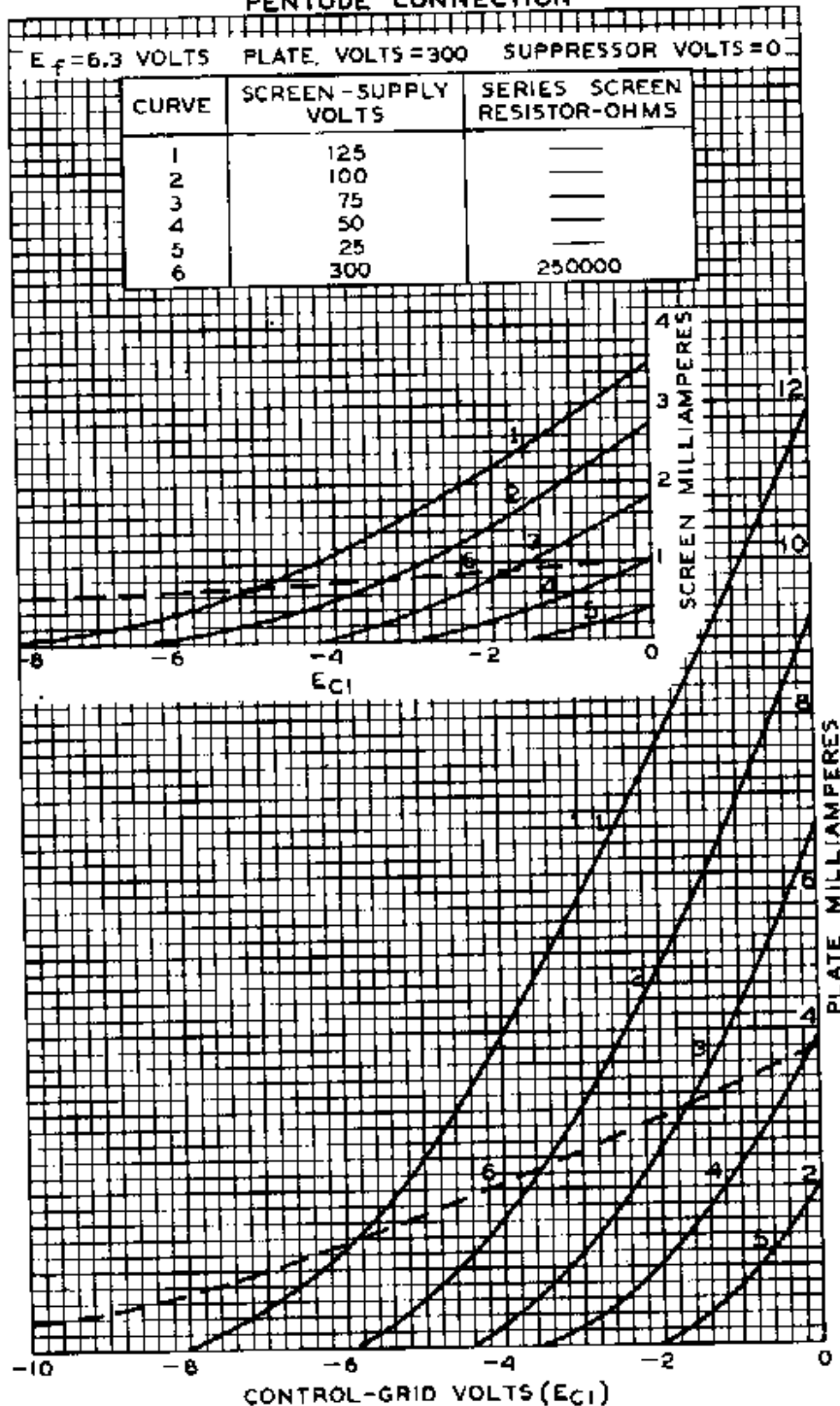
92C-4939



6SJ7

6SJ7

AVERAGE CHARACTERISTICS PENTODE CONNECTION



JUNE 24, 1943

RCA VECTOR DIVISION
RADIO CORPORATION OF AMERICA, HARRISON, NEW JERSEY

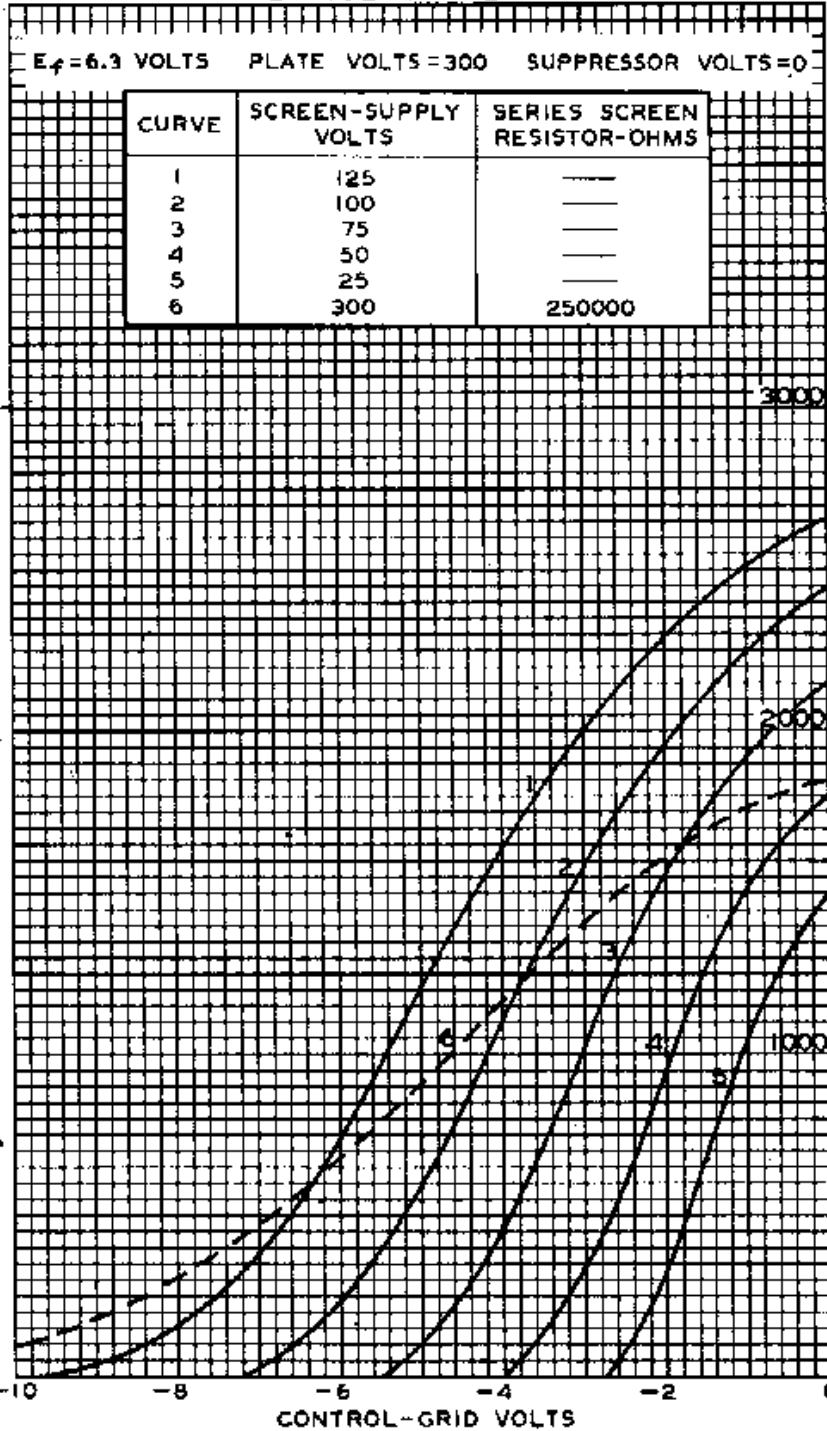
92CM-6443

6SJ7



6SJ7

AVERAGE CHARACTERISTICS
PENTODE CONNECTION



JULY 21, 1943

RCA VICTOR DIVISION
RADIO CORPORATION OF AMERICA, HARRISON, NEW JERSEY.

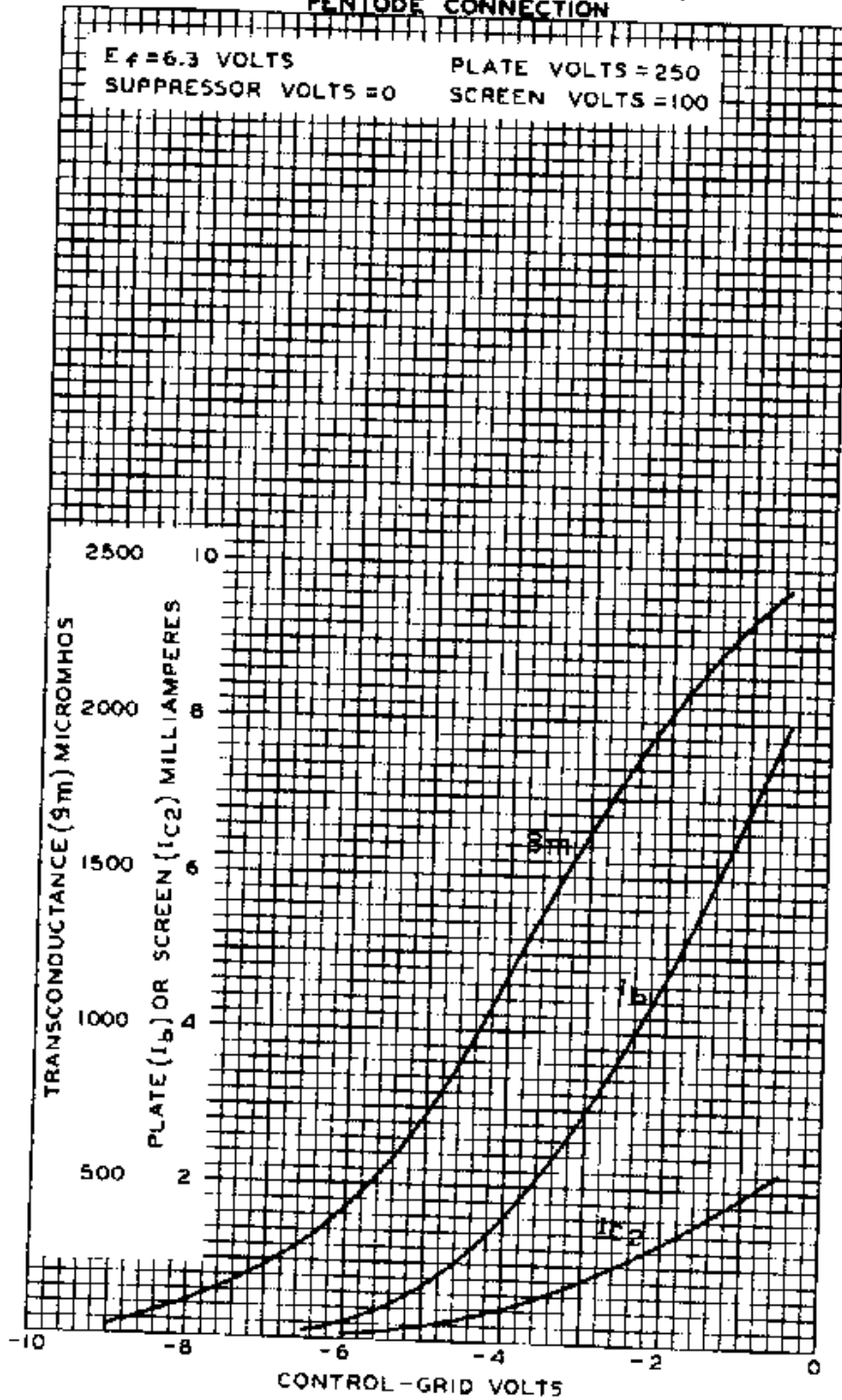
92CM-6444



6SJ7

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AVERAGE CHARACTERISTICS PENTODE CONNECTION



JUNE 23, 1938

RCA RADIODRON DIVISION
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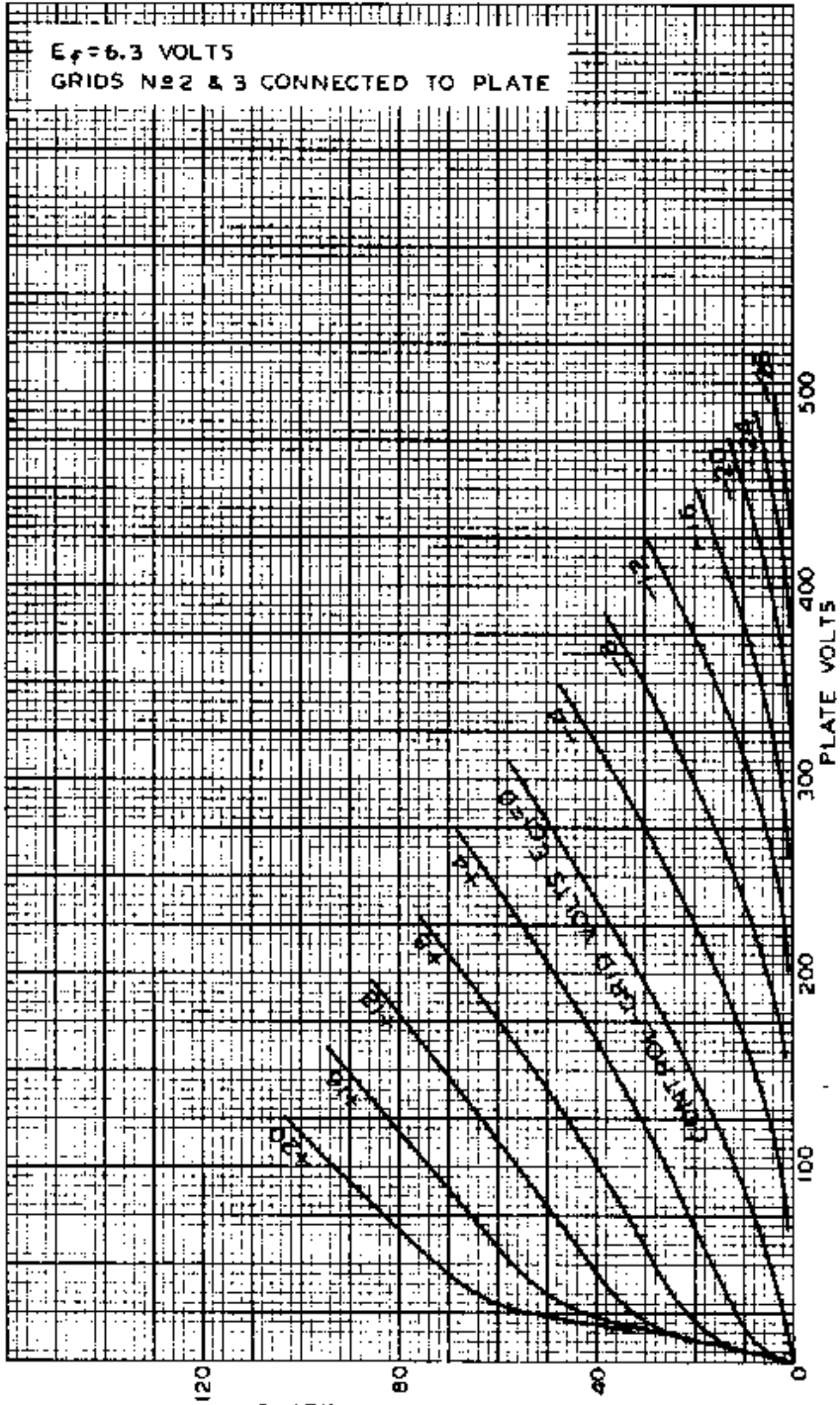
92C-4937

6SJ7



6SJ7

AVERAGE PLATE CHARACTERISTICS TRIODE CONNECTION



JUNE 27, 1942

PLATE MILLIAMPERES
RCA RADIODRON DIVISION
RCA MANUFACTURING COMPANY, INC.

92C-5409



RESISTANCE-COUPLED AMPLIFIER CHARTS (Continued)

20		See Circuit Diagram 3							
E_{bb}	R_p	R_g	R_{g2}	R_k	C_{g2}	C_k	C	E_o	V.G.
90	0.1	0.1	0.29	820	0.09	8.8	0.02	18	41
		0.25	0.29	880	0.085	7.4	0.016	23	68
		0.5	0.31	1000	0.075	6.6	0.007	28	70
	0.25	0.25	0.69	1680	0.06	5.0	0.012	16	75
		0.5	0.92	1700	0.045	4.5	0.005	18	93
		1.0	0.82	1800	0.04	4.0	0.003	22	104
	0.5	0.5	1.5	3600	0.045	2.4	0.003	18	91
		1.0	1.7	3800	0.03	2.4	0.002	22	119
		2.0	1.9	4050	0.028	2.35	0.0015	24	139
180	0.1	0.1	0.29	760	0.10	9.1	0.019	49	55
		0.25	0.31	800	0.09	8.0	0.015	60	82
		0.5	0.37	860	0.09	7.8	0.007	62	91
	0.25	0.25	0.83	1050	0.06	6.8	0.001	38	109
		0.5	0.94	1060	0.06	6.6	0.004	47	131
		1.0	0.94	1100	0.07	6.1	0.003	54	161
	0.5	0.5	1.85	2000	0.05	4.0	0.003	37	151
		1.0	2.2	2180	0.04	3.8	0.002	44	192
		2.0	2.4	2410	0.035	3.6	0.0015	54	208
300	0.1	0.1	0.35	500	0.10	11.6	0.019	73	67
		0.25	0.37	530	0.09	10.9	0.016	96	98
		0.5	0.47	590	0.09	9.9	0.007	101	104
	0.25	0.25	0.89	850	0.07	8.5	0.011	79	139
		0.5	1.10	860	0.06	7.4	0.004	88	167
		1.0	1.18	910	0.06	6.9	0.003	98	185
	0.5	0.5	2.0	1300	0.06	6.0	0.004	64	200
		1.0	2.2	1410	0.05	5.8	0.002	79	238
		2.0	2.5	1530	0.04	5.2	0.0015	89	263

6SJ7, 12SJ7